We claim:

1. An aneurysm treatment device for *in situ* treatment of aneurysms in mammals, optionally humans, the treatment device comprising at least one resiliently collapsible implant collapsible from a first, expanded configuration wherein the implant can support the wall of an aneurysm to a second collapsed configuration wherein the collapsible implant is deliverable into the aneurysm, and wherein the implant does not completely fill the aneurysm.

2. An aneurysm treatment device according to claim 1 wherein the implant has sufficient resilience, or swellability, to return to an expanded configuration within the lumen of the aneurysm.

3. An aneurysm treatment device according to claim 1 wherein the implant is configured so that hydraulic forces within the aneurysm tend to urge the implant against the aneurysm wall.

4. An aneurysm treatment device according to claim 1 wherein the collapsible implant comprises a spreadable portion and a projecting portion, the spreadable portion capable of resting against and providing support to an inner wall of the aneurysm, the projecting portion being integral with the spreadable portion and being capable of being gripped for insertion and positioning of the implant.

5. An aneurysm treatment device according to claim 1 wherein the implant comprises a resiliently compressible polymeric foam.

6. An aneurysm treatment device according to claim 5 wherein the foam member comprises a hydrophobic foam scaffold member coated on the pore surfaces of the foam, within the foam body, to be hydrophilic, optionally with a coating of hydrophilic foam material.

7. An aneurysm treatment device according to claim 6 wherein the foam member comprises a hydrophobic foam scaffold member coated on the pore surfaces of the foam and throughout the pores of the foam with a hydrophilic foam, and wherein the hydrophilic foam carries a pharmacologic agent, optionally fibrin or a fibroblast growth factor, or both.

8. An aneurysm treatment device according to claim 1 comprises a pair of implants cooperable to stabilize the aneurysm.

9. An aneurysm treatment device according to claim 8 wherein one implant, optionally a generally wine glass-shaped implant, can be seated in the neck of the aneurysm and has a spreading portion spreading into the aneurysm to support the aneurysm wall adjacent the antrum and the other implant, optionally a generally mushroom-shaped implant, can ride in the aneurysm and has a spreading portion to support the aneurysm wall opposite the neck of the aneurysm.

10. An aneurysm treatment device according to claim 1 wherein the implant further comprises one or more bioactive materials selected from the group consisting of elastin, growth factors capable of fostering fibroblast proliferation, pharmacologic agents, sclerotic agents, inflammatory substances, genetically acting therapeutics and genetically engineered therapeutics.

11 An aneurysm treatment device according to claim 1 comprising a set of multiple ones of the implant, the set comprising a range of different sizes of the implant, optionally from 2 to about 10 different sizes, and a range of different shapes of the implant, optionally from 2 to about 6 different shapes in one or more of the sizes.

12. An aneurysm treatment device according to claim 1 wherein the spreading

portion of the implant comprises a convex outer surface to contact the aneurysm wall and a concave inner surface.

13. An aneurysm treatment device according to claim 1 wherein implant comprises a foam member having an inner surface and an outer surface, the outer surface having areas of elevations and depression capable of allowing blood flow between the inner wall of the aneurysm and the outer surface of the foam member.

14. An aneurysm treatment device according to claim 1 wherein the implant is porous and permits blood flow into the interior of the implant.

15. An aneurysm treatment device according to claim 1 wherein the implant comprises a reticulated biodurable elastomeric matrix.

16. An aneurysm treatment device according to claim 1 wherein the implant comprises a reticulated biodurable elastomeric matrix and the implant exhibits resilient recovery from compression.

17. An aneurysm treatment device according to claim 1 comprising multiple implants wherein each implant has the shape of a cylinder, a right cylinder, is bullet-shaped, is bullet-shaped with a blind hollow volume, has a tapered, frusto-conical shape optionally with an open-ended hollow volume with a circular, square, rectangular, polygonal cross-section.

18. A method of treating an aneurysm comprising the steps of:

a) imaging an aneurysm to be treated to determine its size and topography;

b) selecting an aneurysm treatment device according to claim 1 for use in treating the aneurysm; and

c) implanting the aneurysm treatment device into the aneurysm.

19. A method according to claim 18 further comprising:

d) loading the aneurysm treatment device into a catheter;

e) threading the catheter through an artery to the aneurysm; and

f) positioning and releasing the aneurysm treatment device in the aneurysm.

20. A method of treating an aneurysm comprising the steps of:

a) imaging an aneurysm to be treated to determine its size and topography;

b) constructing an aneurysm treatment device to be shaped to fill the aneurysm *in situ* and to be deliverable via a catheter, the aneurysm treatment device optionally being resiliently collapsible or swellable to expand to shape *in situ* and including in the aneurysm treatment device a pharmacologic agent for delivery within the aneurysm;

c) implanting the aneurysm treatment device into the aneurysm.

21. A method according to claim 18 wherein the aneurysm treatment device is configured to permit limited blood access between the implant and the aneurysm wall, optionally without significantly pulsing the aneurysm wall.

22. A method for the treatment or prevention of endoleaks from an implanted endovascular graft into a target vascular site, optionally an aneurysm, the method comprising delivering a number of porous and/or reticulated elastomeric implants in a compressed state, into the target site.

23. A method according to claim 22 wherein the number of implants is in the range of from about 2 to about 100.

24. A method according to claim 23 wherein the implants comprise reticulated biodurable elastomeric matrices.